

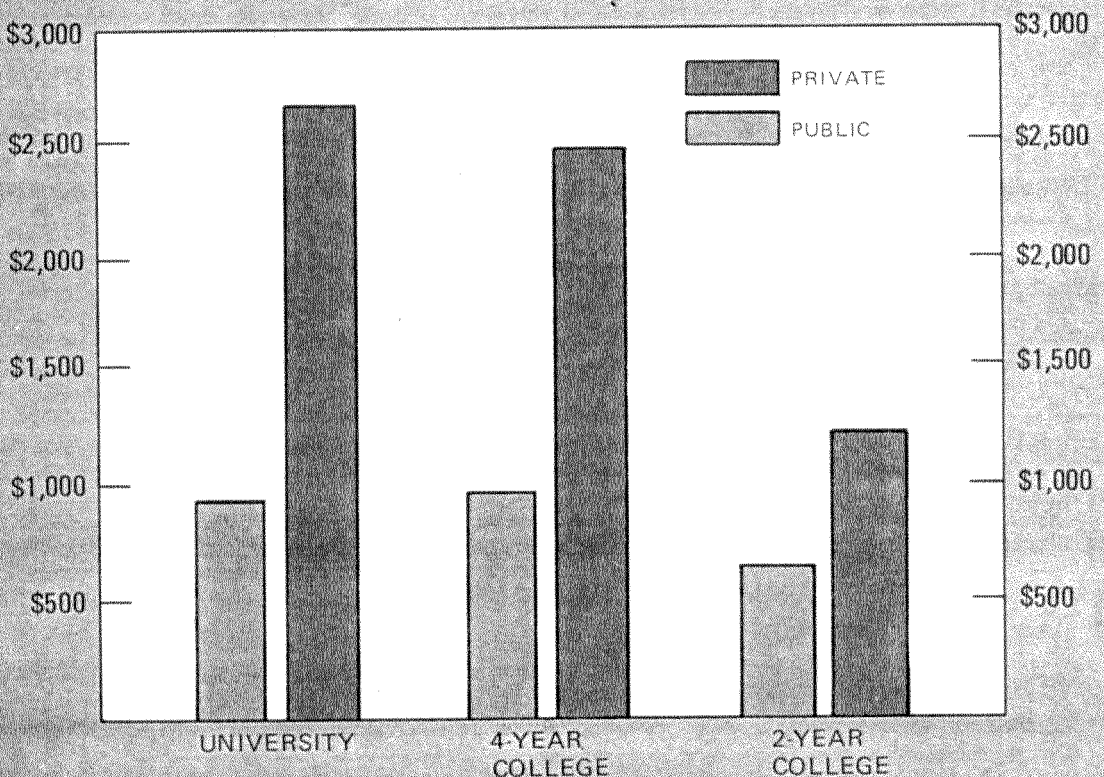
# Population Characteristics

Series P-20, No. 281

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## INCOME AND EXPENSES OF STUDENTS ENROLLED IN POSTSECONDARY SCHOOLS: OCTOBER 1973

Figure 1. Median Yearly Educational Expenses Expected by Full-Time College Students by Type of College: October 1973



U. S. DEPARTMENT OF COMMERCE  
Social and Economic Statistics Administration  
BUREAU OF THE CENSUS



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## CURRENT POPULATION REPORTS

# Population Characteristics

## INCOME AND EXPENSES OF STUDENTS ENROLLED IN POSTSECONDARY SCHOOLS: OCTOBER 1973

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# INCOME AND EXPENSES OF STUDENTS ENROLLED IN POSTSECONDARY SCHOOLS: OCTOBER 1973

This report presents data on the income and expenses of students enrolled in colleges, universities, and vocational schools providing training beyond the high school level based on a supplement to the October 1973 Current Population Survey (CPS). This study was supported by the Basic Educational Opportunity Grants Program of the U.S. Office of Education and conducted by the Bureau of the Census. The tables present data, for students enrolled in October 1973, on family income, expected educational expenses, sources of income, type of school attended, full-time/part-time attendance status, marital status, and financial dependence on parents.

Some major findings of this report are:

1. The median expected educational expenses for full-time college students varied from about \$620 for those in public junior colleges to \$2,640 for students in private universities. The median yearly expenses for full-time students in vocational schools was about \$890.
2. Student's earnings and aid from parents were the most common sources of income for undergraduates. Forty-four percent of postsecondary students (excluding graduate students) worked while attending school to pay for the costs of their education. The average earnings of students who were working was about \$3,300 during the school year. Forty-two percent of students were aided by their parents (who contributed an average of about \$1,600), 8 percent of students received State scholarships or grants, and about 7 percent received local scholarships or grants.
3. Blacks made up about 8 percent of the total postsecondary school enrollment in October 1973. While a slightly lower proportion of blacks than whites was attending universities, the proportion of blacks attending two-year colleges and vocational schools was somewhat higher than that for white students. Similar proportions of white and Negro students attended four-year colleges.

**Enrollment by type of school.** The Nation's total postsecondary enrollment was about 9.7 million in

October 1973.<sup>1</sup> Students enrolled in regular colleges and universities numbered about 8.2 million, or 85 percent of the total postsecondary enrollment. And students attending postsecondary vocational schools totaled 1.5 million in October 1973, or 15 percent of the total postsecondary enrollment (table A). The largest group of vocational school students (about 900,000, or 59 percent) was enrolled in technical, vocational, or trade schools. About 220,000 were enrolled in business or commercial schools, 160,000 in correspondence schools, and a similar number in hospital schools. Somewhat smaller numbers were enrolled in barber or beauty schools and in flight schools.

**Table A.—NUMBER OF POSTSECONDARY STUDENTS 16 YEARS OLD AND OVER BY TYPE OF SCHOOL: OCTOBER 1973**

(Numbers in thousands)

Type of school	Number	Percent distribution
All schools....	9,667	100.0
Colleges, total.....	8,165	84.5
University.....	4,376	45.3
4-year college.....	1,714	17.7
2-year college.....	2,075	21.5
Vocational schools, total.....	1,502	15.5
Business or commercial.....	219	2.3
Technical, vocational or trade...	886	9.2
Flight school.....	27	0.3
Correspondence school.....	160	1.7
Hospital school....	158	1.6
Beauty or barber school.....	52	0.5

<sup>1</sup>This figure does not agree exactly with the comparable number in **Current Population Reports**, Series P-20, No. 272, because some persons who reported that they were enrolled in college on the basic questionnaire, reported in the followup questionnaire that they were not enrolled in any school, or that they were enrolled in a vocational school, or they did not indicate a type of school.

There were differences in the racial composition of the different types of postsecondary schools. Overall, there were 790,000 Negroes in postsecondary schools in 1973, 8 percent of the total enrollment (table 1). A higher proportion of black students than of white students was attending vocational schools and attending two-year colleges, and a lower proportion were attending universities.

Although postsecondary enrollment is divided between regular colleges and vocational schools, enrollment in a vocational school does not indicate a complete lack of regular college experience among these students, as two out of every five students attending a vocational school in 1973 had completed at least one year of regular college, including ten percent who had completed four or more years of college (table B). However, there were some students in vocational school, about 150,000, or 10 percent, who had not completed

high school, as some vocational schools do not require a high school diploma for admission.

Students attending vocational schools were older than the students attending regular college, more likely to be married, and more likely to be working full time. Partly because of these factors, only about one-half of the vocational students were attending full time compared to nearly 70 percent of the college students.<sup>2</sup>

Students enrolled in vocational schools were more likely to be attending a private institution than were the students in regular colleges, 41 percent and 22 percent, respectively (table C); but the proportion in private

<sup>2</sup>Some vocational schools do not have a full-time/part-time attendance distinction; i.e., a student may progress at his own rate until he has fulfilled the school's requirements, courses may only be offered for a few hours in the evening, etc. About 15 percent of vocational students were attending schools on this "not classified" basis.

**Table B.—HIGHEST GRADE OF REGULAR SCHOOL ATTENDED FOR STUDENTS 16 YEARS OLD AND OVER ENROLLED IN VOCATIONAL SCHOOLS: OCTOBER 1973**

Type of vocational school	Total	Less than 4 years of high school	4 years of high school	1 to 3 years of college	4 or more years of college
All vocational schools...	100.0	9.8	47.9	32.3	10.0
Business or commercial.....	100.0	9.1	46.6	34.2	9.6
Technical, vocational or trade.....	100.0	10.0	45.6	35.9	8.5
Correspondence school.....	100.0	11.9	49.4	19.4	18.8
Hospital school.....	100.0	1.3	57.0	32.9	8.9

**Table C.—PERCENT OF POSTSECONDARY STUDENTS 16 YEARS OLD AND OVER IN PUBLIC AND PRIVATE SCHOOLS BY TYPE OF SCHOOL: OCTOBER 1973**

Type of school	Total	Public	Private	Not reported
College, total.....	100.0	75.4	21.8	2.7
University.....	100.0	77.7	20.3	2.0
4-year college.....	100.0	53.6	44.5	1.9
2-year college.....	100.0	88.6	6.3	5.1
Vocational schools, total.....	100.0	51.6	41.4	7.9
Business or commercial.....	100.0	25.1	70.8	4.6
Technical, vocational or trade.....	100.0	73.7	23.8	2.5
Correspondence school.....	100.0	14.4	67.5	18.1
Hospital school.....	100.0	17.7	56.3	25.9
Other vocational school.....	100.0	20.3	75.9	3.8

schools varied by type of vocational institution. At some types of vocational schools, a majority of the students were enrolled in private institutions. About 71 percent of the business or commercial school students were enrolled in private institutions, as were 68 percent of those students enrolled in correspondence schools, for example.

There were more men than women enrolled in postsecondary schools in 1973. However, there were only slight differences, where differences did occur, between the proportion of men and women students attending the different types of schools, attending full time, attending private schools, and in the median expected educational expenses (table D). The women, however, were less likely than the men to be working towards a degree while attending college (11 percent and 7 percent, respectively).

**Educational expenses by type of school.** The postsecondary students in this survey were asked what they

expected their educational expenses to be during the period from July 1973 to June 1974, including tuition and fees, books and supplies, and transportation to and from class. These expected educational expenses were higher for students who were attending four-year colleges than they were for students attending other types of schools. The median amount expected to be spent was about \$1,320 for four-year college students, \$910 for university students, \$530 for vocational school students, and \$410 for two-year college students (table E).

Much of the above difference between four-year college and university educational costs is attributable to the differences in distribution of students by attendance status (i.e., full-time or part-time) and control of school (i.e., public or private). The educational costs for full-time students are about the same at public four-year colleges and universities, while costs for full-time students enrolled at private universities tend to be slightly higher than at private four-year colleges (table F).

**Table D. SELECTED CHARACTERISTICS OF POSTSECONDARY SCHOOL STUDENTS BY SEX AND TYPE OF SCHOOL: OCTOBER 1973**

(Numbers in thousands)

Selected characteristics	Total	University	4-year college	2-year college	Vocational schools
<b>Number of students:</b>					
Male.....	5,347	2,495	889	1,115	848
Female.....	4,320	1,881	825	960	655
<b>Percent distribution by type of school:</b>					
Male.....	100.0	46.7	16.6	20.9	15.9
Female.....	100.0	43.5	19.1	22.2	15.2
<b>Percent attending full time:</b>					
Male.....	66.0	75.1	77.7	54.8	41.6
Female.....	65.2	70.5	77.9	48.1	58.7
<b>Percent attending private schools:</b>					
Male.....	25.2	22.3	44.3	5.1	40.4
Female.....	24.5	17.7	44.7	7.7	42.8
<b>Median expected educational expenses:</b>					
Male.....	\$821	\$967	\$1,287	\$463	\$527
Female.....	\$739	\$834	\$1,363	\$338	\$544
<b>Percent not working towards a degree:</b>					
Male.....	(NA)	3.8	6.5	13.5	(NA)
Female.....	(NA)	7.9	8.1	21.5	(NA)

NA Not available.

Table E. MEDIAN EDUCATIONAL EXPENSES FOR POSTSECONDARY STUDENTS BY TYPE OF SCHOOL:  
OCTOBER 1973

Type of school	Median educational expenses			
	Total	Tuition and fees	Books and supplies	Transportation
Total.....	\$784	\$549	\$124	\$102
University.....	910	650	141	100
4-year college.....	1,318	989	142	101
2-year college.....	410	169	89	114
Vocational schools.....	533	317	58	76

Table F. NUMBER OF COLLEGE STUDENTS AND MEDIAN EXPECTED EDUCATIONAL EXPENSES BY  
TYPE OF COLLEGE, ATTENDANCE STATUS AND CONTROL OF SCHOOL: OCTOBER 1973

(Numbers in thousands)

Attendance status and control of school	All colleges	University	4-year college	2-year college
NUMBER OF STUDENTS				
All Students				
Total <sup>1</sup> .....	8,165	4,375	1,715	2,075
Public.....	6,158	3,399	920	1,839
Private.....	1,784	889	763	131
Full-Time Students				
Total.....	5,607	3,200	1,335	1,073
Public.....	4,168	2,531	689	949
Private.....	1,343	629	621	92
Part-Time Students				
Total.....	2,387	1,116	364	907
Public.....	1,870	829	225	816
Private.....	415	248	133	35
MEDIAN EDUCATIONAL EXPENSES				
All Students				
Total.....	\$834	\$912	\$1,323	\$410
Public.....	721	825	859	401
Private.....	2,108	2,168	2,193	814
Full-Time Students				
Total.....	\$1,052	\$1,090	\$1,640	\$655
Public.....	872	924	984	624
Private.....	2,474	2,638	2,434	1,199
Part-Time Students				
Total.....	\$396	\$527	\$502	\$228
Public.....	346	450	419	224
Private.....	794	890	719	(B)

B Base less than 75,000.

<sup>1</sup>Includes persons not reported on attendance status and control of school, not shown separately.



However, regardless of attendance status, the expected educational expenses of students at private institutions were, on the average, considerably larger than those at public schools. The median expenses for full-time students at private colleges was \$2,470 compared with \$870 at public colleges. At private vocational schools, the expected median educational expenses was \$950 compared with \$300 at public institutions.

The expected expenses for transportation and for books and supplies also varied by type of school. Expected transportation costs tended to be higher for full-time college students in two-year colleges than for four-year college students and university students. This was partly due to differences in living arrangements, as

students in two-year colleges were not as likely to be living in college dormitories or school-owned apartments as were four-year college and university students. Only about 5 percent of two-year college and vocational school students lived in dormitories or school-owned apartments compared with 26 percent of those in four-year colleges and universities (table G). The median amount expected to be spent on transportation was about \$170 for full-time two-year college students compared with \$110 for full-time university students (see table 2). Expected expenses for books and supplies tended to be somewhat higher for full-time university and four-year college students than students at other types of postsecondary schools. For example, the median expenses for books and supplies was about \$160 for full-time university students but only about \$110 for vocational school students.

**Table G. TYPE OF LIVING QUARTERS WHILE ATTENDING SCHOOL FOR POSTSECONDARY STUDENTS  
BY TYPE OF SCHOOL: OCTOBER 1973**

Type of living quarters	Total	University or 4-year college	2-year college	Vocational school
All students.....thousands..	9,667	6,090	2,075	1,502
Total.....	100.0	100.0	100.0	100.0
Private house or apartment.....	77.1	69.0	93.6	86.8
Dormitory or school-owned apartment	18.2	25.7	3.3	8.3
Fraternity or sorority house.....	1.5	2.3	-	0.1
Rooming or boarding house.....	1.0	1.0	0.9	0.9
Other living quarters.....	1.8	1.6	1.7	2.7
Not reported.....	0.5	0.4	0.5	1.2

- Represents zero or rounds to zero.

**Financial dependence on parents.** Many postsecondary students depend on their parents for their educational and living expenses. However, in October 1973, over half, 54 percent, of the postsecondary students indicated that they were financially independent of their parents.<sup>3</sup> The proportion of students who considered themselves financially independent varied, however, by the type of school they were attending (table H). For instance, 72 percent of the vocational school students, but only 39 percent of four-year college students, considered themselves financially independent.

The total expected educational expenses of postsecondary students who considered themselves to be financially independent were considerably less than those of students who were dependent on support from their parents. This relationship holds true not only for postsecondary school students as a whole, but for each type of school as well. For example, the median expected educational expenses of financially independent four-year college students was about \$810 compared with \$1,730 for dependent students.

In part, this difference in expected educational expenses between independent and dependent students is a result of the difference in the proportion of students attending full time. A much larger proportion of dependent students (91 percent) than independent students (44 percent) were attending on a full-time basis in 1973. When the expected expenses of the full-time and part-time students are considered separately, the differences in expected educational expenses disappear

<sup>3</sup>Two different means of determining the financial dependence on parents of postsecondary students are used in this report. In the text and text tables of this report, dependency is based on the student's evaluation of his or her own financial dependence or independence. See the definitions section for explanation and discussion of other means used in the detailed tables.

or lessen depending on the type of school (see table 2). For full-time four-year college students, for example, the median educational expenses expected by independent students was about \$1,320 compared with \$1,760 for dependent students. The remaining difference in educational expenses suggests that students who receive financial assistance from their parents can more readily avail themselves of full-time study and also attend schools with higher costs than those students who are financially independent.

**Table H. PERCENT DISTRIBUTION OF POSTSECONDARY STUDENTS 16 YEARS OLD AND OVER BY FINANCIAL DEPENDENCE ON PARENTS: OCTOBER 1973**

Type of school	Total	Financially dependent	Financially independent
Total.....	100.0	45.8	53.7
University.....	100.0	50.3	49.3
4-year college...	100.0	60.3	39.3
2-year college...	100.0	37.9	61.4
Vocational school	100.0	26.9	72.0

Other sources of income for educational expenses. There are many sources of income that postsecondary students use to defray their educational and living expenses, such as scholarships and grants, personal loans, and their own earnings. However, most sources are utilized by only a small fraction of students (table I). Student earnings during the school year and income from parents were the most common sources of income

for postsecondary students, excluding graduate students, with about 2 out of every 5 expecting to receive income from each of these sources between July 1973 and June 1974. For those students who used their own earnings to defray education expenses, the average amount earned was about \$3,290, while \$1,610 was the average amount expected to be received from parents by those with this kind of income. Other sources of income frequently used by the students were personal savings, 34 percent, spouse's income, 15 percent, and veteran's benefits, 12 percent.

Although no single scholarship or grant program provided educational funds to a large proportion of the postsecondary students, taken together these programs did provide funds for a significant number. About 8 percent of the postsecondary students, excluding graduate students, reported receiving State scholarships or grants, about the same proportion received local scholarships or grants, 3 percent received income through the Educational Opportunity Grants Program, and 1 percent through the Basic Educational Opportunity Grants programs in 1973.<sup>4</sup> These grants or scholarships did not necessarily reach students with low incomes; nearly half of the grant and scholarship recipients were in families with an income of \$10,000 or more, and nearly one-fourth were in families with income of \$15,000 or more.

As was the case with grants and scholarships, no single loan program reached a particularly large segment of postsecondary students. About 5 percent had received National Defense Student loans, 5 percent held Federal guaranteed student loans, and 3 percent had other personal loans to help defer their educational expenses in 1973.

<sup>4</sup>The Basic Education Opportunity Grant Program was open only to first time full-time students in October 1973.

**Table I. PERCENT OF UNDERGRADUATE POSTSECONDARY STUDENTS EXPECTING TO RECEIVE INCOME FROM SELECTED SOURCES BETWEEN JULY 1973 AND JUNE 1974 AND AVERAGE AMOUNT RECEIVED: OCTOBER 1973**

Source of income	All students		4-year college and university students		2-year college students		Vocational school students	
	Percent of students with income from specific source	Average amount received	Percent of students with income from specific source	Average amount received	Percent of students with income from specific source	Average amount received	Percent of students with income from specific source	Average amount received
Personal savings.....	34.0	\$742	42.6	\$742	24.1	\$703	20.4	\$806
Earnings while taking courses.....	44.3	3,289	39.9	2,400	52.9	3,930	46.1	4,721
Spouse's earnings.....	14.8	5,944	11.4	5,324	18.8	6,630	20.2	6,185
Parents.....	42.2	1,607	55.8	1,690	27.3	1,308	19.9	1,431
V.A. benefits.....	11.5	1,742	8.0	1,755	16.3	1,758	16.0	1,701
State scholarship or grant	7.9	658	11.4	707	3.7	383	(B)	(B)
Local scholarship or grant	6.9	689	10.3	712	(B)	(B)	(B)	(B)
National defense student loan.....	5.2	654	8.3	661	(B)	(B)	(B)	(B)
Federal guaranteed student loan.....	5.1	1,139	6.2	1,124	(B)	(B)	5.0	\$1,238

B Base less than 75,000.

**Educational expenses for out-of-State students.** College students who were classified as out-of-State students expected to have higher educational expenses than those classified as in-State students. However, only a relatively small proportion (about 9 percent) of the college students indicated that their schools classified them as out-of-State students. A considerably smaller proportion (only 2 percent) of the two-year college students were classified as out-of-State (table J). Out-of-State college students were more likely to be attending private colleges than were the in-State students, 48 percent and 16 percent, respectively. Out-of-State students were also much more likely to be attending on a full-time basis—89 percent compared with 69 percent of the in-State students. Both these factors contributed to the higher median educational expenses expected by out-of-State students than those expected by in-State students. For out-of-State college students as a whole, the median educational expenses expected in the 1973-74 school year was \$2,140 compared with \$770 for in-State students.

Even among students attending private colleges where State of residence is not usually a factor in assessing tuition, the median educational expenses for out-of-State students was considerably higher than those for in-State students (about \$2,820 compared with \$1,870, respectively). This may in part be due to a tendency for out-of-State students to attend more expensive private colleges in other States.

**Family income and educational expenses.** Postsecondary students in October 1973 were from families with a median income of \$12,470 and their expected

educational expenses were \$810 (table 3).<sup>5</sup> The median expected educational expenses of students was about \$770 in families with incomes under \$25,000, but jumped to about \$1,200 for students in families with income over \$25,000. As total expected educational expenses increased above the \$1,000 level, there was a tendency for students to have higher family incomes. For example, the median family income for students whose expected educational expenses were between \$1,000 and \$2,000 was about \$12,180, compared with a median family income of \$13,750 for students with educational expenses between \$2,000 and \$3,000, and \$16,270 for students with expected expenses over \$3,000.

Both the median family income and expected educational expenses were less for the 3.3 million postsecondary students who were married and living with their spouse than for students of other marital status (mostly single). The family income of these other students usually included that of their parents. The median family income was about \$11,960 for students who were married, spouse present, compared with \$12,830 for students of other marital status (see table 3). The median expected educational expenses for married students was about \$570 compared with \$940 for other students.

**Number of family members attending postsecondary schools and household income.** About 3 out of every 4 of the undergraduate students living with relatives in

<sup>5</sup> This is an underestimate of family income. See Definitions and Explanations section.

**Table J. DISTRIBUTION OF COLLEGE STUDENTS BY RESIDENCE STATUS AND MEDIAN EXPECTED EDUCATIONAL EXPENSES: OCTOBER 1973**

Subject	All college students	University	4-year colleges	2-year colleges
<b>PERCENT DISTRIBUTION</b>				
Total.....	100.0	100.0	100.0	100.0
In-State.....	80.0	80.6	75.2	82.6
Out-of-State.....	8.9	10.4	13.1	2.2
Not applicable or not reported.....	11.1	9.0	11.7	15.2
<b>MEDIAN EXPECTED EDUCATIONAL EXPENSES</b>				
Total.....	\$834	\$912	\$1,323	\$410
In-State.....	774	842	1,058	422
Out-of-State.....	2,138	2,062	2,488	928

1973 were the only persons in their families enrolled in postsecondary schools at that time. An additional 20 percent of undergraduate students were in families with two persons enrolled in postsecondary school, and 3 percent were in families with 3 or more family members enrolled. The incomes of families with more than one postsecondary member tended to be higher than families with only one member in college. The median family income for students who were the only person enrolled in their family was about \$10,900 compared with \$15,600 for students in families with more than one member in postsecondary school.

## RELATED REPORTS

Data on college enrollment for October 1973 were presented in Series P-20, No. 272. Statistics on school enrollment for October of the years prior to 1973 have been published in other reports in Series P-20. A more limited amount of data on expenses of college students were published in *Current Population Reports Series P-20, No. 183, "Characteristics of Students and Their Colleges: October 1966"*, and in *Series Census-ERS P-27, No. 30, "Educational Status, College Plans, and Occupational Status of Farm and Nonfarm Youths: October 1959"*.

Data on college plans of high school seniors for October 1973 were presented in "College Plans of High School Seniors: October 1973," *Current Population Reports, Series P-20, No. 270*.

Statistics on school enrollment for cities, standard metropolitan statistical areas, States, regions, and the United States appear in reports of the decennial censuses. Detailed statistics on school enrollment by age and socioeconomic characteristics for regions and the United States are presented in Subject Reports of the 1970 census, especially in PC(2)-5A, *School Enrollment*.

Figures on school enrollment from the October Current Population Survey differ from decennial census data for reasons in addition to the difference in the dates. In the first place, the survey data exclude the institutional population and members of the Armed Forces. These two groups were included in the census. Second, there were differences in field work. The small

group of Current Population Survey enumerators were more experienced and had more intensive training and supervision than the large number of temporary census enumerators and may have more often obtained more accurate answers from respondents. Third, the census was taken in April and relates to enrollment since February 1, whereas the surveys were taken in October and relate to enrollment in the current term. This difference in months of the year affects not only the extent of school enrollment (through "dropouts" during the school year, etc.) but also the level of school in which persons of a given age are enrolled.

**Data from school systems.** Information on college enrollment is also collected and published by Federal, State, and local governmental agencies, and by independent research organizations. This information is generally obtained from reports of school systems and institutions of higher learning, and from other surveys and censuses. These data are only roughly comparable with data collected by the Bureau of the Census by household interviews, however, because of differences in definitions, subject matter covered, and enumeration methods. The census data are subject to sampling variability, which may be relatively large where numbers for specific age or population groups, or for given school categories, are small.

## DEFINITIONS AND EXPLANATIONS

**Population coverage.** The figures shown are for the civilian population excluding the relatively small number of inmates of institutions, and are restricted to persons 16 years old and over.

**Postsecondary school enrollment.** Persons in households interviewed for the October 1973 Current Population Survey sample who indicated that they were enrolled in a regular college or were "taking any business, vocational or technical courses" were asked to fill out a supplemental questionnaire (CPS-621, reproduced in the appendix). Only those students who filled one of lines 1 through 9 of question 5 (shown below) on that supplemental questionnaire are included as postsecondary students in this report. Students who checked lines 10 or 11 of item 5 or did not respond to item 5 are excluded from this report.

### 5. Mark the one type of school at which you are currently enrolled.

(114)

☐ Mark here if you are taking courses at more than one type of school, and respond in terms of your primary choice.

(115)

- ☐ 1 University
- ☐ 2 Four-year college
- ☐ 3 Two-year community or junior college
- ☐ 4 Business or commercial school
- ☐ 5 Technical, vocational, or trade school
- ☐ 6 Flight school
- ☐ 7 Correspondence school
- ☐ 8 Hospital school
- ☐ 9 Beauty or barber school
- ☐ 10 Company training school
- ☐ 11 Other school - Specify \_\_\_\_\_

**College students.** The term "college students" in this report refers to the sum of those students who indicated in item 5 (above) that they were enrolled at a "university", "four-year college", or a "two-year college".

**Vocational school students.** In this report, the term "vocational school students" refers to the sum of those students who indicated that they were attending one of the types of schools between lines 4 and 9 in item 5 (above), i.e., (a) a business or commercial school, (b) a technical, vocational or trade school, (c) a flight school, (d) a correspondence school, (e) a hospital school, or (f) a beauty or barber school.

**Age.** The age classification is based on the age of the person at his last birthday.

**Race.** The population is divided into three groups on the basis of race: white, Negro, and "other races." The last category includes Indians, Japanese, Chinese, and any other race except white and Negro.

**Spanish origin.** Information on origin or descent was obtained by asking "What is (this person's) origin or descent?" Responses generally refer to a person's perceived national or ethnic lineage and do not necessarily indicate the country of birth of himself or his parents. The category Spanish origin includes persons of Mexican, Puerto Rican, Central or South American, and other Spanish origin.

**Marital status.** The marital status category shown in this report, "married, spouse present," only includes persons who are currently married and living with their spouse. The "other marital status" category includes persons who were currently married, but their spouse was absent due to legal separation, etc., divorced, widowed, and single (never married).

**Financial dependence on parents.** Two means of determining the financial dependence on parents of postsecondary students are used in this report. The first is based on the response of students to a question which asked directly if they considered themselves to be financially independent of their parents (see question 8, section A, CPS 621). This definition is used in the text of the report and in tables 2 and 4. The second definition is based on responses to a set of questions which in part correspond to the Basic Educational Opportunity Grant's program definition of financial independence. A student was classified as independent if he or she responded negatively to all parts of questions 11, 12, and 13 of section A on the C.P.S. 621 questionnaire (see appendix A), that is, if during the period between 1972 and 1974 they had not or did not plan to live with their parents, received \$600 or more from their parents or were claimed as a dependent on their parent's income tax return. Students were classified "dependent" if they responded affirmatively to any part of these items. This definition is used in table 8. The proportion of students who classified themselves as independent is higher than the proportion who were classified as independent using the B.E.O.G.'s program definition (see table K).

**Table K. SELF-EVALUATION OF FINANCIAL INDEPENDENCE OF POSTSECONDARY STUDENTS 16 YEARS OLD AND OVER BY BASIC EDUCATIONAL OPPORTUNITY GRANTS PROGRAM CRITERIA OF FINANCIAL INDEPENDENCE: OCTOBER 1973**

(Numbers in thousands)

B.E.O.G.'s program definition of financial independence <sup>1</sup>	Total	Self-evaluation of independence		
		Independent	Dependent	Not reported
Total.....	9,667	5,188	4,426	53
Independent.....	3,393	3,288	94	11
Dependent.....	5,704	1,685	4,001	18
Not reported.....	570	215	330	25

<sup>1</sup>See text for definition.

**Public or private school.** Students were asked to classify their school as either publicly or privately owned. A public school is defined as any educational institution operated by publicly elected or appointed school officials and supported by public funds. Private schools include educational institutions established and

operated by religious bodies, as well as those which are under other private control. In cases where enrollment was in a school or college which was both publicly and privately controlled or supported, enrollment was counted according to whether it was primarily public or private.

**Full-time and part-time attendance.** Students who identified their school as a college were asked to indicate whether they were attending on a full- or part-time basis. A student was regarded as attending college full time if he was taking 12 or more hours of classes during the average school week, and part time if he was taking less than 12 hours of classes during the average school week. A similar question was asked of students attending vocational schools, with the additional option of "not classified" since some vocational schools do not have a full/part-time distinction.

**Living arrangements.** The data on living arrangements of postsecondary students are based on responses to an item which asked the students with whom they were living while attending school (see appendix, question

6, section A, CPS-621). In the Current Population Survey, single postsecondary students are counted as household members of the place where they reside when **not** attending school (unless they have permanently left their parental home). Married students and student nurses in the Current Population Survey are normally counted where they live while attending school.

**Type of living quarters.** Students were asked to describe their living quarters while attending school (see appendix, question 7, section A, CPS-621).

**Educational expenses.** Data on educational expenses were derived from responses to the item reproduced below.

<p>15. What do you expect <b>YOUR</b> total educational expenses to be between July 1973 and June 1974, regardless of who pays them? If your spouse or other dependents are attending college, or a business, vocational, or technical school, <b>DO NOT</b> include their educational expenses here.</p>	
a. Tuition and fees . . . . .	(134)
b. Books and supplies . . . . .	(135)
c. Transportation to and from class . . . . .	(136)
	(137)

Dollars only	
\$	00
\$	00
\$	00
OR (Mark (X) box if none)	
<input type="checkbox"/>	None

The sum of the three parts of this item is referred to in the report as "total educational expenses". It should be noted that room and board expenses are not here included as educational expenses.

**Earnings of students.** Data on earnings of students in the report are based on responses to an item which asked the students what their expected earnings would be between July 1973 and June 1974 in (a) wages and salary income and (b) net self-employment income. (see item 14, section A, CPS-621, appendix.)

**Sources of income.** Data on sources of income were derived from responses of the students to a question which asked how much, if any, of their income they expected to derive from a list of 16 possible sources. (See item 17, section A, CPS-621, appendix.)

**Family income.** Income as defined in this report represents the combined total money income of the family before deductions for personal taxes, Social Security, bonds, etc. It is the algebraic sum of money wages and salaries, net income from self-employment, and income other than earnings received by all family members during the 12 months prior to the surveys. It should be noted that although the family income statistics refer to receipts during the previous 12 months, the characteristics of the person, such as age, marital status, etc., and the composition of families refer to the date of the survey.

The income tables include in the lowest income group those who were classified as having no income in the previous 12 months and those reporting a loss in net income from farm and nonfarm self-employment or in rental income.

The income tables in this report include a separate category for families for whom no income information was obtained. In most of the other Current Population Survey reports showing income data, the missing income data have been allocated.

The money income level of families shown in this report may be somewhat understated. Income data from the October control card are based on the respondent's estimate of total family money income for the preceding 12 months coded in broad, fixed income intervals. Income data collected in the March supplement to the Current Population Survey are based on responses to 8 direct questions asked of all persons 14 years old and over identifying 14 different sources of income and cover the preceding calendar year.

Previous research has shown that the use of broad income intervals to record money income tends to reduce the rate of nonreporting while increasing the likelihood that the amounts reported will be significantly understated as compared with results from more detailed questions.

**Family.** The term "family," as used here, refers to a group of two persons or more related by blood, marriage, or adoption and residing together; all such persons are considered as members of one family. A primary family is a family which includes among its members the head of a household.

## SOURCE AND RELIABILITY OF THE ESTIMATES

**Source of data.** The estimates contained in this report are based on data obtained from drop-off questionnaires that were given to households which had indicated on a supplement to the October 1973 Current Population Survey the presence in some form of postsecondary schooling of at least one member of the household. The Current Population Survey sample is spread over 461 areas comprising 923 counties and independent cities with covering in each of the 50 States and the District of Columbia. Approximately 47,000 occupied households are eligible for interview each month. Of this number 2,000 occupied units, on the average, are visited but interviews are not obtained because the occupants are not found at home after repeated calls or are unavailable for some other reason. In addition to the 47,000 there are also about 8,000 sample units in an average month which are visited but are found to be vacant or otherwise not to be interviewed.

The estimation procedure used in this survey involved the inflation of the weighted sample results to independent estimates of the civilian noninstitutional population of the United States by age, race, and sex. Those independent estimates were based on statistics from the 1970 Census of Population; statistics of births, deaths, immigration, and emigration; and statistics on the strength of the Armed Forces.

**Reliability of the estimates.** Since the estimates are based on a sample, they may differ somewhat from the figures that would have been obtained if a complete census had been taken using the same schedules, instructions and enumerators. As in any survey work, the results are subject to errors of response and of reporting, as well as being subject to sampling variability.

The standard error is primarily a measure of sampling variability, that is, of the variations that occur by chance because a sample rather than the whole of the population is surveyed. As calculated for this report, the standard error also partially measures the effect of certain response and enumeration errors, but it does not measure, as such, any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the survey differs from a complete census figure by less than the standard error. The chances are about 90 out of 100 that this difference would be less than 1.6 times the standard error, and chances are 95 out of 100 that the difference would be less than twice the standard error.

All statements of comparison appearing in the text are significant at a 1.6 standard error level or better and most are significant at a level of more than 2.0 standard errors. This means that for most differences cited in the text, the estimated difference is greater than twice the standard error of the difference. Statements of comparison qualified in some way (e.g., by the use of the phrase "some evidence") have a level of significance between 1.6 and 2.0 standard errors.

The figures presented in tables L and M are approximations to the standard errors of various estimates shown in this report. In order to derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. As a result, standard errors contained in tables L and M provide an indication of the order of magnitude of the standard errors rather than the precise standard error for any specific item. Table L contains the standard errors of estimated numbers. Table M contains standard errors of estimated percentages. The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the total upon which the percentage is based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. Linear interpolation in these tables may be used to obtain standard errors for intermediate values.

**Table L. STANDARD ERRORS OF ESTIMATED TOTALS FOR EDUCATION**

All Numbers in Thousands  
(68 chances out of 100)

Size of estimate	Standard error
25.....	8
50.....	11
100.....	15
250.....	24
500.....	34
750.....	42
1,000.....	48
2,000.....	68
3,000.....	83
4,000.....	95
5,000.....	106
6,000.....	116
7,000.....	125
8,000.....	133
9,000.....	140
10,000.....	147

Table M. STANDARD ERRORS OF ESTIMATED PERCENTAGES FOR EDUCATIONAL CHARACTERISTICS

(68 chances out of 100)

Base of percentage (Numbers in thousands)	Estimated percentage					
	2 or 98	5 or 95	10 or 90	25 or 75	35 or 65	50
250.....	1.3	2.1	2.9	4.2	4.6	4.8
500.....	1.0	1.5	2.0	3.0	3.3	3.4
750.....	0.8	1.2	1.7	2.4	2.7	2.8
1,000.....	0.7	1.1	1.4	2.1	2.3	2.4
2,000.....	0.5	0.7	1.0	1.5	1.6	1.7
3,000.....	0.4	0.6	0.8	1.2	1.3	1.4
4,000.....	0.3	0.5	0.7	1.0	1.1	1.2
5,000.....	0.3	0.5	0.6	0.9	1.0	1.1
6,000.....	0.3	0.4	0.6	0.9	0.9	1.0
7,000.....	0.3	0.4	0.5	0.8	0.9	0.9
8,000.....	0.2	0.4	0.5	0.7	0.8	0.9
9,000.....	0.2	0.4	0.5	0.7	0.8	0.8
10,000.....	0.2	0.3	0.5	0.7	0.7	0.8

**Illustration of the use of tables of standard errors.**

Detailed table 1 of this report shows that there were 1,715,000 persons attending a 4 year college in October, 1973. Linear interpolation in table L of this sampling statement shows the standard error on an estimate of this size to be approximately 62,000. The chances are 68 out of 100 that the estimate would have been a figure differing from a complete census figure by less than 62,000. The chances are 95 out of 100 that the estimate would have differed from a complete census figure by less than 124,000; i.e., this 95 percent confidence interval would be from 1,591,000 to 1,839,000.

Detailed table 1 also shows that the 1,715,000 students represented approximately 17.7 percent of the 9,667,000 students in all postsecondary schools. Table M provides standard errors of percentages for educational characteristics and indicates the standard error of the estimated 17.7 percent is approximately 0.6 percent. Consequently, chances are 68 out of 100 that the estimated 17.7 percent would be within 0.6 percentage points of a complete census figure, and chances are 95 out of 100 that the estimate would be within 1.2 percentage points of a census figure; i.e., this 95 percent confidence interval would be from 16.5 to 18.9 percent.

**Differences.** For a difference between two sample estimates, the standard error is approximately equal to the square root of the sum of the squares of the standard errors of each estimate considered separately. This formula will represent the actual standard error quite accurately for the difference between two estimates of the same characteristic in two different areas, or for the difference between separate and uncorrelated character-

istics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will over estimate the true standard error.

**Illustration of the computation of the standard error of a difference.** Detailed table 2 of this report shows that in October 1973 7.8 percent of students attending a 4 year college reported educational expenses of under \$250. The corresponding percentage for students attending vocational school was 32.9 percent. Thus, the apparent difference in these percentages is 25.1 percent. Two way linear interpolation in table M of this sampling statement shows the standard error of the estimated 7.8 percent on a base of 1,665,000 persons to be approximately 1.0 percent. The same procedure shows the standard error of 32.9 percent on a base of 1,502,000 persons to be approximately 1.9 percent. The standard error of the estimated difference of 25.1 percent is about 2.1 percent =  $\sqrt{(1.0)^2 + (1.9)^2}$ . This means the chances are 68 out of 100 that the estimated difference based on the samples would differ from the change derived using complete census figures by less than 2.1 percent. The 68 percent confidence interval around the 25.1 percent change is from 23.0 percent to 27.2 percent, i.e.,  $25.1 \pm 2.1$ . A conclusion that the average estimate of the change derived from all possible samples lies within a range computed in this way would be correct for roughly 68 percent of all possible samples. The 95 percent confidence interval is 20.9 percent to 29.3 percent. Thus we can conclude with 95 percent confidence that the percentage of students attending 4 year colleges whose educational expenses are less than \$250 is less than the corresponding percentage of vocational students.



**Medians.** The sampling variability of an estimated median depends upon the form as well as on the size of the distribution from which the median is determined. An approximate method for measuring the reliability of a median is to determine an interval about the estimated median, such that there is a stated degree of confidence that the median based on a complete census lies within the interval. The following procedure may be used to estimate confidence limits of a median based on sample data: (1) from table M determine the standard error of a 50 percent characteristic, using the appropriate base; (2) add to and subtract from 50 percent the standard error determined in step (1); and (3) using the distribution of the characteristic, read off the confidence interval corresponding to the two points established in step (2). A two standard error confidence interval may be determined by finding the values corresponding to 50 percent plus and minus twice the standard error determined in step (1).

**Illustration of the computation of the standard error of a median.** Text table E shows that the median educational expense for university students was \$910 in October, 1973. The size, or base, of the distribution from which the median was determined is 4,242,000 students.

1. Table M of this sampling statement shows that the standard error of 50 percent on a base of 4,242,000 is about 1.2 percent.
2. To obtain a two standard error confidence interval on the estimated median, initially add to and subtract from 50 percent twice the standard error found in step (1). This yields percentage limits of 47.6 and 52.4.

3. From detailed table 2 it can be seen that about 38.5 percent of university students had educational expenses of less than \$750 and 17.9 percent had educational expenses between \$750 and \$1,000. By linear interpolation the lower limit on the estimate is found to be about:

$$\$750 + (\$1,000 - \$750) \left( \frac{47.6 - 38.5}{17.9} \right) = \$877$$

Similarly, the upper limit may be found by linear interpolation to be about:

$$\$750 + (\$1,000 - \$750) \left( \frac{52.4 - 38.5}{17.9} \right) = \$944$$

Thus, the 95 percent confidence interval ranges from \$877 to \$944.

**Illustration of the computation of the standard error of a mean.** To get a rough estimate of the standard error of a mean, the following formula can be used:

$$\sigma_{\bar{x}}^2 = R \left[ \frac{\sum_{i=1}^c P_i X_i^2}{n} - \frac{\bar{x}^2}{n} \right]$$

where:  $n$  is the weighted total number of cases in all  $c$  classes,  $P_i$  is the proportion of total cases in the  $i^{\text{th}}$  class,  $X_i$  is the midpoint of the  $i^{\text{th}}$  class, and  $\bar{x}$  is the mean value of the distribution,  $\sum_{i=1}^c P_i X_i$ .

$R$  is a constant which depends on the sample size, the sample design, and the estimation procedure. For calculations in this report,  $R = 2323.9469$  may be used. To obtain an estimated standard error for a mean find  $\sigma_{\bar{x}}^2$  and take the square root.